THAT WHICH IS CLAIMED:

- An improved golf ball comprising:
 a hollow metal sphere and an outer cover surrounding the hollow sphere.
- A golf ball according to claim 1 further comprising a second layer disposed between the sphere and the outer cover.
- 3. A golf ball according to claim 2 wherein the second layer has a thickness of about 0.05 to 0.65 inches.
- 4. A golf ball according to claim 1
 wherein the metal is selected from the group consisting
 of titanium, titanium alloys, stainless steel,

 5 stainless steel alloys, nickel, nickel alloys,
 aluminum, aluminum alloys, molybdenum, molybdenum
 alloys, tungsten, tungsten alloys, carbon steel, and
 iron.
 - 5. A golf ball of claim 1 wherein the hollow sphere has an outer diameter of about 0.39 inches to 1.5 inches.

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- 6. A golf ball according to claim 1 wherein the hollow sphere has a wall thickness of about 0.02 inches to 0.08 inches.
- 7. A golf ball according to claim 1 wherein the hollow sphere has a wall thickness of about 0.02 to 0.25 inches.
- 8. A golf ball according to claim 1 wherein the sphere is porous or perforated.
- 9. A golf ball according to claim 1 wherein the metal has a hardness of greater than 40 on the Brinnell hardness scale.
- 10. A golf ball according to claim 1 wherein the metal has a specific gravity of about 4 to 11.
- 11. A golf ball according to claim 1 wherein the metal has a specific gravity of about 2.5 to 20.
- 12. A golf ball according to claim 1 wherein the hollow sphere contains a material having a density

less than the density of the outer layer.

- 13. A golf ball according to claim 12 wherein the material is a gas.
- 14. A golf ball according to claim 1 wherein the sphere contains a solid or liquid material.
- 15. An improved golf ball comprising: a hollow, hard plastic sphere and an outer cover surrounding the sphere wherein the hollow sphere is filled at least substantially with a gas.
- 16. A golf ball according to claim 15 wherein the plastic sphere has a hardness of greater than 60 on the Shore D hardness scale.
- 17. A golf ball according to claim 15 wherein the plastic sphere contains a material having a density less than the density of the outer cover.
- 18. A golf ball according to claim 15 wherein the hard plastic sphere is made of polypropylene.

- 19. A golf ball according to claim 15 wherein the plastic sphere has an outer diameter of about 0.39 to 1.5 inches.
- 20. A golf ball according to claim 15 wherein the plastic sphere has a thickness of about 0.05 to 0.5 inches.